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Before the
Subcommittee on Water Resources and Environment
Committee on Transportation and Infrastructure
U.S. House of Representatives
June 8, 2006

Mr. Chairman and Members of the Committee, I thank you for the opportunity to contribute to the subject of today=s Hearing, the Reauthorization of the Brownfields Program B Success and Future Challenges. The Small Business Liability Relief and Brownfields Revitalization Act of 2001 has very efficiently provided wide-ranging positive economic and environmental impacts, and reauthorization can expand those benefits in future years.

By way of disclosure, let me note that I recently have been, and continue to be, a beneficiary of the Program, since I am funded to conduct research on behalf of Brownfield Program stakeholders whose efforts to reclaim and redevelop sites on which reuse is impeded by real or perceived contamination is affected by the programs of the federal government. My first research on brownfields, with my colleague Dr. Kristen Yount, Professor of Sociology at Northern Kentucky University B with whom I continue to work, dates to 1993, well before the Program was launched. We first received federal funding for our work two years later, working on a project funded jointly by EPA and the Department of Housing and Urban Development (HUD). At the time, I was Professor of Urban Policy and Economics at the University of Louisville, where I am now an Emeritus Professor but continue to serve as Director of the Center for Environmental Policy and Management and Co-Director of our EPA-supported Environmental Finance Center.

For more than a decade, I have had the privilege of conducting research on all aspects of brownfields redevelopment and provided technical assistance to states and localities across the nation. Funding has come from different EPA offices, as well as from HUD and the Economic Development Administration of the Department of Commerce. My prior experience included over a decade as Director of the Local Economic Development Assistance Project at The Pennsylvania State University, a role that has shaped my perspective on CERCLA and brownfields policy.

Dr. Yount and I have conducted case study, survey and literature review analyses of a broad array of actors on the brownfields scene, including appraisers, bankers and other lenders, business environmental managers, community members, private developers, local economic development organizations, realtors, and state regulatory and economic development bodies. In recent years, we have specialized in analyzing issues related to environmental insurance and other risk management approaches for the Office of Brownfield Cleanup and Redevelopment and its predecessor, the Outreach and Special Projects Staff of EPA=s Office of Solid Waste and Emergency Response. (I have appended a list of the titles and URLs of our reports on different federal agency websites.)

My objectives today are to comment on some singular successes of the brownfields program as a whole, and the 2001 legislation in particular, briefly addressing the issue of their cost-effectiveness, and then to turn to some issues that may be considered as challenges.

On Successes

Much has changed in the climate for brownfield redevelopment in the past four years, stemming from finally having some federally legislated initiative that distinguishes brownfields from superfund sites, provides clear definitions, offers explicit conditions for liability relief, and encourages other levels of government to promote the reuse of previously developed sites through a program of grants:

- All the states have brownfield programs B a far cry from where we were in the late 1990s, when the matter of cleaning up previously polluted sites was seen as a federal problem.

- There are now many different brownfield redevelopers, of varying sizes and capacities, from those operating across the country to others specializing in their local settings. The people and companies I characterized as Abrownfield cowboys@ in a study conducted when there were only a few dozen firms chasing high profits by taking on immense risks now complain about too many other firms competing with them for the previously unwanted sites they used to be able to buy for a song.

  Having Atoo many developers@ is a singular measure of success. An economist=s interpretation would be that the entry into the market of many new brownfield redevelopment firms must be seen as a reflection of the reduction in barriers to entry. That is, the new legislation, with liability relief, a delegation of enforcement powers to the states, and all the other provisions in the 2001 law, has made it easier for private firms to enter into the business of mitigating and redeveloping brownfields. The evidence of economic success lies in the increased number of firms, the profits they are making, and the jobs and new tax revenues they are creating. The evidence on environmental quality success lies in the completion of projects that meet state standards for site remediation.

- Growth in the number of real estate investment pools that specialize in previously developed properties, including those that can be expected to have been polluted. This expansion of investment activity is indicative of the new climate created by the 2001 legislation. Given that a large proportion of those pools attract pension fund monies, the fact that pension fund managers now accept that brownfield projects can satisfy the Aprudent man rule@ that governs their investment decisions is a measure of the risk reduction and certainty that Congress and the Brownfields Program have provided to this real estate sector.

- States continue to innovate in developing new incentives and regulatory relief systems to encourage identification and redevelopment of brownfields within their borders. Given the fiscal pinch felt in many states, a strong case can be made that the funding of state brownfield initiatives under the 2001 Act provided the foundation on which this innovation has flourished.

  My sideline company, The E.P. Systems Group, Inc., was responsible for the conduct of *An Assessment of State Brownfields Initiatives* that the Department of Housing and Urban Development released in 1999. After considering a number of state efforts to study, we looked at Massachusetts, Michigan and Pennsylvania, rust-belt states with major pollution problems associated with abandoned factories, because we could fince few significant initiatives in states outside the northeast and midwest. Today, that has all changed, and I contend that the Brownfields Program has played a major

role in getting states around the country to confront not just their large factory sites, but the mass of sites left behind by machine shops, small foundries and smithies, appliance repairers, auto maintenance and repair facilities, dry cleaners, paint stores, and the like. We now can see state-level innovation across the nation.

My knowledge of current state activities is grounded in an ongoing study in which Dr. Yount and I are monitoring state decisions and providing technical assistance to decision-makers with respect to facilitating developers= access to private insurance products as a means of managing brownfield risks. Five states have developed some form of program (MA, WI, CT, NY, and CO). A number of others are in the process of developing or investigating the potential benefits of a program (AK, DE, ID, IN, NJ, OH, OR, PA, RI, VT, VA, and WY).

Diversity exists among states that have insurance programs. MA provides a direct subsidy to the cost of the coverage, while NY simply makes a credit against state taxes available as a means of subsidizing insurance coverage. CT provides technical assistance and may offer support for premium costs, while CO is just implementing an information hotline. WI has a different approach from the others, insuring *itself* against losses arising from offering liability relief to developers using natural attenuation of groundwater, a lengthy process monitored over time.

- The number of applicants for the different grants available under the 2001 law continues to grow. In light of the other findings about changes since 2001, this expanded demand cannot be easily dismissed just as publicity-driven local pursuit of federal funds. Local pressures building for decades for reuse of abandoned sites, and for cleanup of potentially health or eco-system threatening pollution conditions have finally been met by a new federally-generated clarity of mitigation standards and opportunities to gain liability relief. The 2001 Act and the Brownfields Program provided cities, towns, counties, and Native American tribes with the opportunity to test if small amounts of visible public support for brownfields could attract the private investment that is essential to redevelopment. They took up the challenge, applied for funding, launched new initiatives, and the influx of new investors into the brownfield marketplace demonstrates that their efforts have borne fruit.

The Brownfields program has been a singular success in stimulating a new investment climate.

Cost-Effectiveness

These successes are real, but you, no doubt, will note that I, an economist, have failed to cite a single dollar figure on the value of the activities generated by the liability clarifications or the private investments leveraged by the grants provided under the Act. This is a matter of some concern.

I cite no numbers, because there are no direct impact measures that I consider to be reliable. That is not to say that there has not been substantial effort expended on the part of EPA and others in the federal government on the problem of impact measurement. The effort is there, but the requisite data are not available, and there is little sign that there is any level of government prepared to expend the very extensive effort B and substantial financial resources B required to produce the needed information.

Believing as I do that the grants provided under the Act have had a significant impact on the rates of reclamation of contaminated sites and the redevelopment of underutilized lands in and near our urban centers, I would not recommend diverting limited funds to such data collection. There are other ways to measure impacts, and I will discuss some below. However, I want to comment first on what we already

know about the problems of measuring the impacts of brownfield policies. The problem that brownfields pose is a specific case of the general difficulty we face in connecting particular policy interventions to specific investments in a complex and changing economic environment.

$ The Acounter-factual@ is not knowable: when we observe passage of a policy followed by a specific act by a party intended to be influenced (a subsidy offering, followed by an investment, for example), we have no way of knowing what would have occurred in the absence of the policy intervention. We have theories and hypotheses, and but no hard evidence, since the costs of controlling for all the external variation are simply too great. (Even attempting to extrapolate from a series of other situations is tenuous as best, as the Appraisal Institute has noted in its past pronouncements on valuation of contaminated B and stigmatized B real estate.)

$ The direct economic impacts of a site mitigation and redevelopment are not limited to increases in the value of that single parcel of land, but spill over to changes in the value of other properties. (The presumption of such a spillover is the basis for the extensive reliance on Tax Increment Financing by local economic development agencies across the U.S.A.) The extent of spillovers from brownfield cleanups has never been fully measured (although there is some preliminary evidence in work done for the Superfund branch by E2, Inc. that suggests that larger off-site effects may swamp site-level impacts). The highly detailed data collection required to provide reliable measures of the impacts on property values spreading out from a single contaminated parcel, and how they shift with the size of the site, the proximity of other brownfields, the strength of the local real estate market, etc., has never been undertaken B perhaps because, even if the data were available, they could only show correlation, not strict causality.

$ The value of individual economic development incentives is not known; in most cases we cannot even rank order the significance of different incentives. In practice, a number of different inducements are offered in bundles and that makes it almost impossible to separate the impacts of the individual elements. But the myriad studies of economic development incentives that have been undertaken just make things worse: developers are asked to rate or rank incentives individually, often just to give a score of from 1 to 10 on their importance. No developer who is paying attention would fail to rate each incentive of interest to his firm as Aessential@ or a 10, in an effort to encourage provision of as many additions to his bottom line as possible. That is the only rational answer from a profit-maximizing respondent. Research methodologists work to make it impossible to give such Astrategic responses;@ they are not asked to design local surveys.

We can conclude that, as a nation, we do not have good generalizable tools for measuring direct economic development impacts, a key element of any assessment of the economic value of the Brownfield Program. There are, however, other measures by which we can gauge the impact of the program on the flow of private capital into contaminated land reclamation and redevelopment.

 The accelerated rate of entry of new firms into the brownfield redevelopment business is one such measure. With project costs in the multiple tens of millions of dollars, it is difficult to say that federal grants of $200,000 or $350,000 to local governments brought development companies into the brownfields business even if the public recipients just passed along the funds. But something did attract them to regeneration projects.

What changed more in the urban redevelopment arena than anything else as a result of the passage of the Small Business Liability Relief and Brownfields Revitalization Act in 2001 is the contaminated land investment *climate* across the nation B and effects of that climate change cannot be measured by calculating the federal B or other public B dollars in any one deal. We cannot ascribe the new state-level brownfield program initiatives in Idaho or Wyoming just to market forces raising the prices of old brownfield sites, which would have made such investments attractive even without the Act. New interest in reclamation and regeneration on the part of both the private sector and local governments has been generated by the Brownfields Program itself B even in states without growing real estate demands. The grants, then, have to be seen, not as federal support for individual brownfield projects, even in priority efforts in some localities, but rather as investments in changing the whole perception of brownfield projects and in reducing the tendency to exaggerate the risks on reclaiming and redeveloping such previously used sites.

- The appearance B even if not the reality B of certainty with respect to liability relief and regulatory processes are key to private developer interest in brownfields. The Brownfields Program as a whole, and its heightened visibility through an expanded grants program, has contributed to a greater sense of certainty, through new liability relief provisions and the wide attention to that relief that the regulatory negotiations on the All Appropriate Inquiry standards attracted.

My claim of the importance is not a claim made lightly or on theoretical grounds. Under a grant from EPA=s National Center for Environmental Research, under a special program for examination of Market Mechanisms and Incentives, I conducted a survey in 2003-2004 of developers who were members of the Urban Land Institute with my colleagues Kris Wernstedt from Resources for the Future and Anna Alberini of the University of Maryland. We offered a hypothetical brownfield project with details about costs and returns on investments to the developers and asked them to choose between different bundles of incentives designed to attract them to investing in the project. Using a specialized statistical tool called conjoint analysis, we were able to identify the value of complete certainty with respect to key sources of risk in brownfield projects. Our findings, now in print in multiple peer-reviewed journals, were stark:

- < Complete certainty on cleanup standards and thus costs was declared by developers to have a value equal to about 15% of expected project profits.
- < Complete certainty with respect to relief from future liability was declared to be worth roughly an additional 20% in project profits.

It is thus appropriate to argue that the increased sense of certainty provided by the Brownfields Program helps explain the perceived behavior of developers, who are now more willing to take on brownfield projects than they were before 2002. (A one page summary, with other findings, appeared in *Brownfield News* in June, 2005. A copy is appended to my written submission.)

The claim about cost-effectiveness that can be derived from this study also is worthy of note: The climate of greater certainty that appears to have attracted more developers to brownfields did the job that would otherwise have had to be accomplished by subsidies and tax breaks to raise the risk-adjusted rates of return for investors. Based on our study cited above, perceived certainty on both cleanup costs and prospective liability would be worth over $1,700,000 on a $25 Million residential redevelopment of an industrial brownfield. We can conservatively attribute only $500,000 of this figure on average on a $25 Million project to the perceived risk reduction, but not certainty resulting

from the Brownfields Program. That $500,000 is then the reduction in the returns the average investor would demand for a risk-adjusted return on a brownfield investment.

Next, we can take the claim of $7.2 Billion in leveraged investments from EPA=s *Brownfields Stakeholder Report* of 2004 and assume, again conservatively, that only $5 Billion of that was private sector investment made after the passage of the 2001 Act. It thus follows, using the $500,000 to $25,000,000 ratio, that the effects of the Brownfields program on perceived risk reduction may have saved state and local governments $100 Million in subsidies they otherwise would have had to offer developers to generate the extent of brownfield redevelopment we have experienced. This is a benefit on top of the more direct effects, namely raising property value, producing new jobs and taxes revenues, and reducing human health and environment damage costs, routinely associated with the Brownfields Program and its grants.

Let me reiterate here that these certainty effects on the flow of investment capital come from both the actual liability relief provided in the 2001 Act and from the publicity about those provisions associated with the increased grant program that it authorized. A contrast can be drawn between the 2001 Act and the 1997 Budget Reconciliation that legislated a form of lender liability relief that EPA had been providing through its regulatory process for years. It took lenders years to learn about the relief (and I see evidence to this day that not all have learned about the benefits the 1997 legislation provided). Developers got the message about liability relief much faster B and the big difference in the two situations is that the 2001 Act generated far more publicity due to the expanded grant programs involving both states and localities that were incorporated with the liability relief for innocent parties, neighbors and certain redevelopers.

<u>On Challenges</u>

The successes of the Brownfields Program are, in part, the generators of the challenges. As more and more sites get attention and get redeveloped, the sites remaining to be regenerated always will be more difficult to work on than those already addressed. I want to focus attention on three issues today, all of which pose policy challenges and all of which currently impose substantial costs on the American economy. I shall address (a) Amothballed@ sites, (b) small sites, and (c) depressed and contaminated areas. My comments and examples derive primarily from the urban settings I know best, but some points also apply to mine-scarred lands, of which we have a few in Kentucky.

Mothballed Sites

Major American corporations have substantial assets tied up in closed factories and mines, many of which may have positive value as real estate, even after site mitigation costs are taken into account. That is, not all mothballed sites are so-called Aupside down@ properties on which the cleanup costs appear to exceed the value of the land Aas if clean,@ to use the appraisers= jargon. Some could be very profitable redevelopment properties, were it not for their owners= concerns about prospective liability risk exposures.

Those mothballed assets are idle, and constitute a drag on the entire US economy, since the capital is not invested in productive activity. To the extent that the assets are in locations that would be the optimal sites for other economic activities, the alternative users of the properties are forced to use suboptimal locations, so the economy is further impaired. There is thus a strong economic efficiency argument in favor of doing something about mothballed sites, even those that do not pose any environmental threats

by remaining unremediated. (Obviously, to the extent that the failure to do anything about an environmental condition actually results in damages to human health and ecological conditions, the case for action is strengthened further, but I want to stress the purely *economic* case here.)

It is fairly simple to understand why sites are mothballed: they are held out of future use by firms that fear that they will be the Adeep pockets@ that will be tapped under the strict joint and several liability provisions of CERCLA if any problems or costs arise, no matter how far into the future. It is much more complicated to determine what one might do about the idled assets and productivity losses:

$ New legislation to relieve the firms of prospective liability, even after some future date just transfers the costs to others B and who will those parties be? Presumably *not* the public sector.

$ While insurance is a useful tool for many environmental risks, the current market will support, at best, a ten-year term on a pollution liability policy, so this risk transfer tool helps little on mothballed sites.

$ Prepaid insurance programs, setting aside funds for purchase of new pollution liability policies when the current ones expire, assume that the coverage will still be sold, that the firm holding the set-aside funds will still be viable, and that the funds will be sufficient to buy the coverage.

$ Federal legislation (or accounting provisions going beyond those in FAS 143 and FIN 47) may be able to force the conduct of actual site assessments on all idled and environmentally suspect sites, but even this requirement would not necessarily result in remediations.

  < In Massachusetts, where the results of the assessment would have to be reported, the state might require remediation, but in Pennsylvania, there is no requirement that the firm that does a site assessment report findings to the state, so the mothballer may still not act.

  < In some instances, such an assessment will show the firm that the environmental response costs are much lower than expected B but if what is deterring redevelopment is the liability concern, not redevelopment project costs, this finding will not reduce mothballing.

  On balance, such a provision may simply add regulatory costs without generating redevelopment.

$ Given the will to examine the issue B and it is one that will involve fee payments to a sequestered account that is not part of general federal revenues and from which the government cannot be permitted to borrow B the federal government could act as a reinsurer of last resort for the environmental insurance industry. (Reinsurers insure the primary insurance underwriters for a share in premiums, so the fee structure could mirror industry practice but just give the underwriters a more reliable back-up. It is common practice for the insurers to reinsure each other, thus spreading risk, but the credit ratings of insurers rise and fall, limiting their long-term reliability as reinsurers.) This approach could lead to longer terms for coverages and a greater willingness to enter into prepaid programs since the good faith and credit of the federal government will be more highly rated than that of the insurers.

$ The federal government could move to force actual site mitigation by mothballers, which might lead them to release their land for redevelopment to recover the costs of cleanups. Alternatively, there might be a federal or EPA role in encouraging states to let local governments exercise powers of eminent domain to take mothballed sites and get them back to productive use. Both of these approaches, however, would require accepting a more coercive role for the state, turning our backs on what has been one of the strengths of the Brownfields Program B cooperation.

Over the long haul, it does appear that some sort of public-private collaboration on assuring the safe reuse of mothballed sites will have to be negotiated across all the stakeholders, and then legislated. The Brownfields Program is a good structural network through which to initiate such negotiations.

Small Sites

It is likely that there is not a single local property tax jurisdiction in the nation that has not had to deal with the abandonment of small parcels of land. When those abandoned sites are brownfields, we as a society have a major problem on our hands. In those states in which tax delinquent property automatically transfers to municipal title, such as Missouri or New Jersey, the problem is the environmental liability the city takes on. Those states that offer sovereign immunity to cities can avoid the liability problem. But the municipalities that enjoy sovereign immunity then share the problem of the localities that do not have to take title in the first place, such as Kentucky: the existence of abandoned properties, sometimes with buildings or other Aattractive nuisances@ on them.

Logic (and limited data) tells us that the vast majority of the up to one million reputed brownfields across the nation are under one acre in size. Just how big are the lots occupied by gas stations, machine shops, small foundries and smithies, appliance repairers, auto maintenance and repair facilities, dry cleaners, paint stores, small fertilizer B or pesticide and herbicide B blenders and the myriad other mom and pop operations that have always been the majority of American businesses? Probably mostly under half an acre, or even smaller. How many of them are abandoned? We don=t have hard data, but the likelihood that the original polluter on any of these small sites is still in business has to be considered to be extremely low. The same holds for the probable financial capacity of the current owner if it is not an abandoned site. In this part of the brownfields world, unlike that of the large factory sites, there are no deep pockets.

If the environmental problems are severe enough, the economic returns to getting one abandoned site of this size back into productive use will never be as great as the effort needed to do so. Even if the environmental problems are not severe (and the majority of brownfields probably suffer only from Aperceived@ contamination), the costs of finding out that the site is usable may be too great for a small parcel. And, even if you can determine the site is clean at a reasonable cost, it may still be too small to attract the attention of a redevelopment investor.

When we did the study of brownfield redevelopment specialists a few years ago, every company reported that it had no interest in any sites of less than ten to twenty acres. Our findings parallel the experiences of urban economic development officials across the continent who struggle to assemble sufficiently large tracts of land to attract real estate investment capital from outside the local area. And all those officials will tell you that site assembly efforts B or, worse yet, subsequent marketing efforts B can be undermined by even the hint of contamination on one small site in the bundle.

That complaint about the single site, however, provides the clue to the solution. If one contaminated quarter-acre parcel can make a ten to twenty acre site unattractive to a redeveloper, what is the economic value of getting that parcel cleaned? What is the potential return to a municipality from stepping in itself and remediating a small brownfield that has depressed the economic attractiveness of all the other sites nearby? This spillover return is not yet well enough recognized, so small sites get relatively short shrift in brownfields program planning.

Recognizing the economic payoff to redeveloping a key parcel led cities in the 1980s to push the logic of Tax Increment Financing, under which the increased revenues *from an area* that could result from the redevelopment of a *single parcel* can be used to provide debt service for an economic development bond. The tool has been used for strategically located large underutilized sites in many

cases, so this is nothing new, even for brownfields ... except that the logic has not been applied to finding the funds to redevelop the quarter-acre site through recognizing that the new revenues from, say, five acres around it that may help payoff a loan taken out by a city or redevelopment agency. The failure to recognize small scale brownfield off-site effects is illustrated by the Michigan Brownfield TIF program, which permits only on-site revenue gains to count, while the state has a separate Industrial TIF program that recognizes off-site effects.

But even where the TIF logic is well understood, and the state encourages the creation of Brownfield Redevelopment Districts for economic development planning B in New Jersey, for example B the municipal liability issue remains a potential problem for site assembly efforts. In the NJ case, if a city inherits a site due to tax delinquency, the state does not consider it liable for environmental conditions on the property. The same does not apply to any brownfield *voluntarily* acquired by a local redevelopment office in its efforts to attract renewed real estate investment.

But I am happy to be able to not merely report on the problem of small sites, but also to note that the Office of Brownfield Cleanup and Redevelopment is examining ways of addressing the issues B at least some of the funds we have received are devoted to the problem, and area-wide impacts have become more prominent in the discussions at the office=s annual Brownfields conferences.

This is evidence to me of some recognition of a problem and a need to address it. That the small sites problem is only now coming into focus is a function of the magnitude of the problem posed by the abandoned, non-mothballed larger sites with which EPA and our local governments have had to cope. Their successes with the larger sites now allows us now to move to another issue.

It can be difficult to convince local officials desperate for new real estate tax revenues that, rather than clean up an abandoned lot and try to maximize the taxes from the single parcel, they should make an effort to determine what new use will maximize *total area tax increments* rather than on-site property value. Minor changes in the weights given to features of proposed local brownfield programs in future OBCR application instructions and/or in the merit scoring of those elements could, however, start to get local officials to think more in these terms. In this manner the grants themselves could not just help cities develop brownfield regeneration programs, but also educate them further about how to make more efficient use of the funds at their disposal. As we move forward, we can learn from Great Britain and others in Europe, notably Germany, Belgium, and the Netherlands, all of which have developed contaminated land policies grounded in an *area approach*.

Depressed and Contaminated Areas

A further dimension of the small sites problem arises from the fact that such sites do not arise in isolation. In urban settings, depressed neighborhoods may be shot through with many brownfields, whether underutilized or abandoned, that combine to undermine prospects for area regeneration.

Any investor in a brownfield counts some profit made on the increase in the value of real estate holdings arising from completion of a required environmental response undertaken as part of the expected return on investment. In depressed neighborhoods with multiple brownfields, there may be no value increment to the mitigation of any one site. The presence of others nearby generates an area-wide stigma that holds down increased property values for even the remediated sites.

Localities with such economically depressed and environmentally damaged zones have little choice other than to try and tackle bundles of brownfields simultaneously. The alternative B providing a project-by-project, site-by-site subsidy to developers to compensate them for the loss of the value increment on mitigating small sites B is just too costly for local government budgets.

If local authorities are to work on such bundles, then they will need to acquire them if not all the sites have been abandoned. They thus will have to accept additional contingent liability claims for the cleanups and past environmental damage in most of the states. In light of the revisions to the GASB standards for municipal accounting now being completed, those liabilities may have to be declared, with attendant weakening of the bond ratings of the local governments making such acquisitions B and thus increased borrowing costs for the very funds needed to accomplish the cleanups. Openness is a positive characteristic for any accounting system and the full disclosure is desirable. The outcome in this case, however, may be perverse: undermining local governments= willingness to address an economic development and environmental protection issue of great importance to the nation.

Thus, if there were any contemplated changes in the authorizing legislation for the Brownfields Program, I would encourage inclusion of language that provides explicit relief from federal liability for local government units and agencies that acquire brownfields for the purpose of redevelopment. Given the delegation of environmental response standards to the states that is already present in the 2001 Act, this federal assurance may not have substance in terms of real liability relief. It may, however, signal to the states that Congress does not consider imposing new obligations on those local governments and counties trying to improve their economic and environmental status to be a constructive approach to addressing the nation=s contaminated land legacy.

I thank you for your attention and look forward to any questions you may have.

Selected Relevant Publications Authored by Dr. Meyer

for other information or articles, he can be reached at <pbmeyer@ouisville.edu>

Reports for Federal Agencies and Departments

T *Environmental Insurance Products Available for Brownfields Redevelopment, 2005* (With K. Yount) (USEPA, 2006) <http://www.epa.gov/brownfields/pubs/enviro_insurance_2006.pdf>

T *Update: State Brownfield Insurance Programs, 2005* (With K. Yount) (USEPA, 2006) <http://www.epa.gov/brownfields/pubs/insurance_update_2006.pdf>

T *Brownfields Insurance for Public Sector-Led Development Projects: Experience and Methods* (With K. Yount) (USEPA 2005) <http://www.epa.gov/brownfields/pubs/bf_case_studies_report.pdf>

T *State Brownfield Insurance Programs, 2004* (With K. Yount) (USEPA 2004) <http://www.epa.gov/brownfields/pubs/state_report_04_revised.pdf>

T *Models of Government-Led Brownfield Insurance Programs* (With K. Yount.) (US EPA, 2002). <http://www.epa.gov/swerosps/bf/pdf/nku2002.pdf>

T *Environmental Insurance and Public Sector Brownfield Programs: Factors Affecting Pursuit of Insurance as a Redevelopment Tool* (With K. Yount.) (US EPA, 2000). <http://www.epa.gov/swerosps/bf/pdf/meyeryou.pdf>

T *Reclamation and Economic Regeneration of Brownfields* (With H.W. VanLandingham) (Economic Development Administration 2000). <http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/meyer_2epdf/v1/meyer.pdf>

T *An Assessment of State Brownfield Initiatives* (HUD 2000). <http://www.huduser.org/publications/econdev/assess.html>

T *Environmental Insurance for Urban Redevelopment: A Feasibility Study* (With K. Chilton) (HUD 1998). <http://www.huduser.org/publications/econdev/envins.html>

T *The Effects of Environmental Hazards and Regulation of Urban Redevelopment* (Co-authored with five others) (HUD 1998). <http://www.huduser.org/publications/econdev/bfield.html>

T *Financing SmallBScale Urban Redevelopment Projects: A Sourcebook for Borrowers Reusing Environmentally Suspect Sites* (With K. Yount) (EPA 1997). <http://www.smartgrowth.org/library/finsbk.html>

Practice Guides for Local Official (from U. of Louisville Environmental Finance Center):

T *Public Strategies for Cost-Effective Community Brownfield Redevelopment* (With H.W. VanLandingham) <http://cepm.louisville.edu/Pubs_WPapers/practiceguides/PG1.pdf>

T *Closing the Brownfield Information Gap: Some Practical Methods for Identifying Brownfields* (With S.L. Coffin) <http://cepm.louisville.edu/Pubs_WPapers/practiceguides/PG3.pdf>

T *Utilizing Environmental Insurance for Brownfield Redevelopment* (With S.L. Hollis and T.L. Lambert) <http://cepm.louisville.edu/Pubs_WPapers/practiceguides/PG4.pdf>.

What Do Developers Want?

By Kris Wernstedt and Peter B. Meyer

There are numerous success stories of public actions that appear to have attracted private investment in brownfield properties. However, we have little systematic evidence of what really works best to stimulate investment.

What, for instance, is the relative value to private developers of third party liability protection versus protection from additional cleanup requirements after state approval of a response? How significant are incentives to a project's bottom line? Do developers care when and in what form public subsidies come?

The high value placed on third party liability relief reflects demand for certainty.

Looking for Answers

With a research grant from the U.S. EPA, we recently surveyed more than 300 private developers who are members of the Urban Land Institute about their preferences regarding the redevelopment of contaminated properties.

We presented our respondents with a hypothetical $25 million residential redevelopment project that included $1 million of environmental costs for assessment and cleanup and an expected 20 percent return on investment. We asked each respondent to select a preferred hypothetical incentive bundle from a list of options.

The bundles included reimbursement for environmental assessment, public hearing considerations, full protection from any reopener costs after regulatory approval of the cleanup, full protection from any third party liability for environmental damage claims, and construction subsidies. Based on the responses, we statistically estimated the relative attractiveness of each individual action and translated these into dollar terms.

Our analysis suggests full relief from third party liability offers the biggest bang, representing nearly 20 percent of the project's profit. Protection from additional cleanup costs in the event of a change in standards or the discovery of additional contaminants is worth nearly 15 percent of the profit.

Introducing an additional public hearing requirement, in contrast, imposed the equivalent of a cost representing almost five percent of the profit. This likely reflects the possible deterioration in cash flows associated with requirements arising from the hearing or time from an extended project horizon.

Prior to the analysis, we expected that reimbursement for the costs of the environmental assessment would look better than a construction subsidy on a dollar-for-dollar basis because the latter is not paid if the project fails to go forward. But looking at all of our responses, we cannot detect a significant difference in the relative value of these subsidies, likely because of the small size of the reimbursement relative to the expected profit (about two percent).

However, the one-quarter of respondents who indicated that they preferred cash subsidies to fee waivers of equivalent value (for water hookups, for example) indicate a higher value for an assessment reimbursement than for an equivalent construction subsidy.

What Does It Mean?

What do these results suggest for the development of brownfield programs? The high value placed on third party liability relief reflects demand for certainty about and protection from lawsuits that more states may be able to address, either through legislative and regulatory changes or state-facilitated insurance. The states also could gainfully support cleanup protection, given the difficulty in obtaining privately-provided insurance policies for sites such as our hypothetical project that have cleanup costs under $1–2 million.

In addition, while requirements for public hearings on brownfield projects appear to impose costs on developers, these costs are significantly less than those associated with liability risks. To the degree that public hearings help reduce future cleanup or environmental liability claims, such hearings could increase expected returns even absent state-sponsored liability relief.

Finally, the risk-based cleanups that are common at brownfield projects may leave residual contamination as well as residual financial risks. Our findings suggest that a risk-based cleanup could leave the equivalent of over $1 million worth of profits on a site when compared to a cleanup that eliminates all future liabilities. This result suggests that private developers and public officials both need to weigh the savings associated with lower upfront remediation costs against the costs of controlling the residual risks. **BFN**

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